sweeping the field of view across the field of regard in a selected direction by rotating the gimbal about the inner axis while maintaining the gimbal at a fixed angle with respect to the outer axis;

progressing to a subsequent scan position by rotating the gimbal about the outer axis by a predetermined increment angle while maintaining the gimbal at a fixed angle with respect the inner axis;

repeating the act of sweeping such that the selected direction is chosen alternately from a first direction and a second direction that is opposed to the first direction; and

repeating the act of progressing prior to each repeated act of sweeping;

wherein a line of sight of the imager is perpendicular to the outer axis, so that there is substantially no rotation, with respect to the instantaneous direction of scan, of an image formed on the imager.

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2. *(Once Amended)* An apparatus for scanning a two dimensional field of regard, the apparatus comprising:

a telescope having a focal plane and a field of view;

one or more image sensors disposed at the focal plane;

a single optically flat mirror disposed in the object space of the telescope;

wherein the flat mirror sweeps the field of view continuously across the field of regard while maintaining a fixed relationship between the rotational direction of scan and the projection of the telescope's focal plane.

3. The apparatus of claim 2, wherein the image sensors are configured to perform time delay and integration imaging.

4. The apparatus of claim 2, wherein the image sensors are configured to perform multi-spectral imaging.

5. The apparatus of claim 2, wherein the image sensors are configured to perform hyperspectral imaging.

6. *(Once Amended)* An apparatus for scanning a two dimensional field of regard, the apparatus comprising:

a telescope having a focal plane and a field of view;

one or more image sensors disposed at the focal plane;

a single optically flat mirror disposed in the object space of the telescope; and

a gimbal having an inner axis and an outer axis, the flat mirror being mounted on the gimbal;

wherein the flat mirror scans the field of view across the field of regard while maintaining a fixed relationship between the rotational direction of scan and the projection of the

telescope's focal plane; and

wherein the field of view covers the two dimensional field of regard via a series of conical arcs, each arc being scanned by rotation about the inner axis of the gimbal.

7. The apparatus of claim 6, wherein an active scanning portion of each conical arc is separated from an active scanning portion of the subsequent conical arc by a brief vertical deflection interval.

8. The apparatus of claim 7, wherein rotation about the outer axis of the gimbal is stepped during the vertical deflection interval.

9. *(Once Amended)* The apparatus of claim 7, wherein rotation about the outer axis of the gimbal is fixed during the active scanning portion.

10. *(Once Amended)* The apparatus of claim 7, wherein rotation about the inner axis of the gimbal remains substantially fixed during the vertical deflection interval.

11. The apparatus of claim 7, wherein rotation about the inner axis of the gimbal slews the scan back to a starting position during vertical deflection interval

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12. The apparatus of claim 2, wherein each conical arc is scanned at a constant angular velocity throughout the arc.

13. *(Once Amended)* An apparatus for imaging a two dimensional field of regard, the apparatus comprising:

an imager having a field of view along a line of sight, the field of view being substantially smaller that the field of regard;

a scan mirror disposed so as to cast the line of sight onto the field of regard, the scan mirror being mounted on a gimbal having an inner axis and an outer axis;

wherein the line of sight of the imager is perpendicular to the outer axis, so that the scan mirror causes the line of sight to be scanned across the field of regard in a conical arc when the scan mirror is rotated about the inner axis with no rotation about the outer axis.

Add new claims 14-16 as follows:

-- **14**. *(New)* The apparatus of claim 13, wherein the imager comprises:

a telescope having a focal plane; and

one or more image sensors disposed at the focal plane;

wherein the image sensors are configured to perform time delay and integration imaging.

15. *(New)* The apparatus of claim 13, wherein the imager comprises:

a telescope having a focal plane; and

one or more image sensors disposed at the focal plane;

wherein the image sensors are configured to perform multi-spectral imaging.

16. *(New)* The apparatus of claim 13, wherein the imager comprises:

a telescope having a focal plane; and

one or more image sensors disposed at the focal plane;

wherein the image sensors are configured to perform hyperspectral imaging. --